Chapter 5: Mental Health

Introduction

A person's gender and/or sex can impact the presentation and prevalence of mental illness due to differences in environmental, social, hormonal, and physiological factors.[1] The toll mental illness takes on women and their families is emotional, physical and financial. Women struggling with mental health conditions are more likely to limit beneficial activities such as exercise and to engage in health risk behaviors such as cigarette smoking and heavy alcohol use.[2, 3] In the U.S., mental illnesses cost billions of dollars each year in direct health costs, lost wages, decreased productivity, relapse, and suicide. Mental illness may also affect women's health indirectly as women are more often the caregivers for family members struggling with mental illness.[1] The biggest challenge for many women suffering with a mental health disorder in Maine is finding and accessing affordable, effective treatment.[4]

Health-related Quality of Life

Health-related quality of life (HRQOL) refers to the perception of one's health, both mental and physical. Although HRQOL is broad and subjective, research has demonstrated that self-assessed health can be a stronger predictor of illness and mortality than more objective measures of health.[5] HRQOL measures can be used to assess the burden of illness and identify vulnerable subpopulations. For women, HRQOL data can capture the effects of health risks not traditionally assessed in health surveys, such as child-bearing, parenting, violence, and caregiving.[5] The following section examines responses to three HRQOL questions on Maine's Behavioral Risk Factor Surveillance System (BRFSS):[6]

1. Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?
2. Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?[6]
3. During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?

Prevalence

On average, women in Maine report they have about four days per month when their physical (3.8 days per month) or mental (4.1 days per month) health was not good. Each year between 2005 and 2009, there was not a statistically significant difference in the number of mentally unhealthy days per month compared to the number of physically unhealthy days per month reported by women in Maine. About 10% of women reported that poor physical or mental health prevented them from participating in their usual activities.[6]

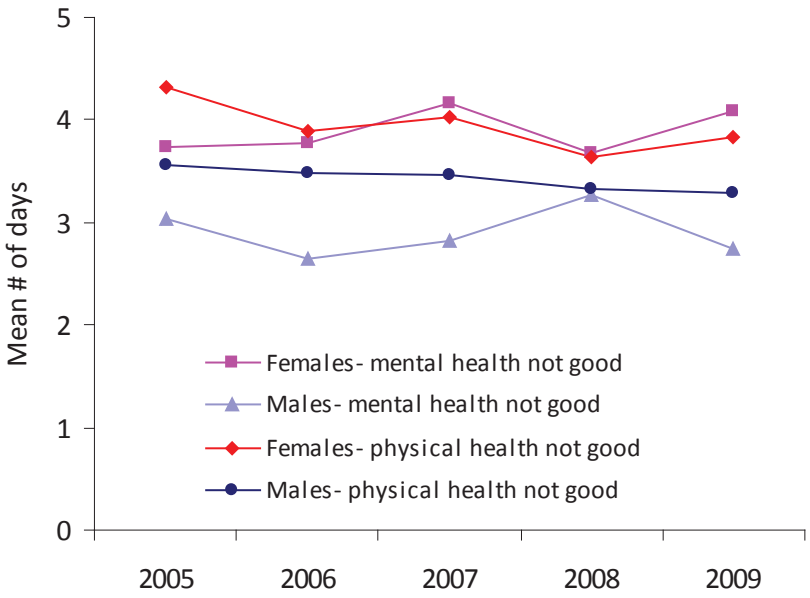
Sex

Women are more likely than men to report experiencing days when their physical or mental health was not good; the sex difference is greatest for mentally unhealthy days. In 2009, Maine

men and women reported a mean of 2.7 and 4.1 mentally unhealthy days in the past 30 days, respectively.[6] This was similar to the U.S. average number of mentally unhealthy days per 30 days (3.0 for men and 4.0 for women).[7] The difference between men's and women's mean number of physically unhealthy days is narrower and not significantly different. In 2009, the mean number of physically unhealthy days (in the past 30 days) was 3.3 and 3.8 days, respectively among men and women in Maine.[6] In the U.S. the average number of physically unhealthy days was similar: 3.2-Men, 4.0-Women.[8] Sex differences in unhealthy days remained relatively consistent between 2005 to 2009 (Figure 5.1).[6]

Figure 5.1.

Mean number of days mental and physical health not good in past 30 days by sex, Maine, 2005-2009



Source: BRFSS[6]

The percentage of Maine women and men who reported that poor mental or physical health kept them from doing their usual activities fluctuated between 2005 and 2009, with no reliable pattern emerging by sex (Table 5.1). There was no statistically significant difference in the prevalence of this indicator between men and women.[6]

Table 5.1. Prevalence of adults reporting that their mental or physical health kept them from doing their usual activities by sex, Maine, 2005-2009.

	Women		Men	
Year	%	(95% CI)	%	(95% CI)
2005	11.4	(8.4 - 14.4)	7.2	(4.4 - 9.9)
2006	7.7	(5.6 - 9.7)	9.4	(6.2 - 12.6)
2007	11.2	(8.7 - 13.6)	10.3	(6.7 - 14.0)
2008	9.8	(7.5 - 12.0)	9.9	(7.0 - 12.9)
2009	9.8	(7.7 - 11.9)	8.3	(5.8 - 10.8)

Source: BRFSS[6]

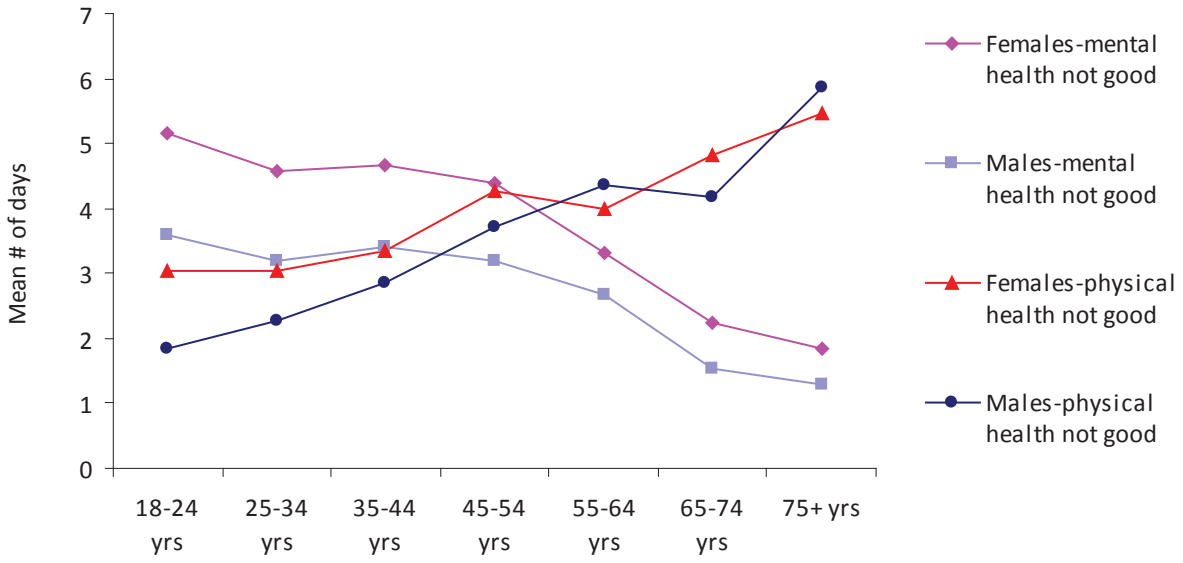
Age

As men and women age, they tend to report more days when their physical health is not good and fewer days when their mental health is not good. Conversely, younger men and women report more days when their mental health is not good, and fewer days when their physical health is not good. Between 2005-2009, women aged 18-24 years reported an average of 5.1 days per month when their mental health was not good; among women over 75 years of age, the mean number was 1.8 days per month (Table 5.2). In contrast, women over age 75 reported 5.5 physically unhealthy days per month, while women aged 18-24 years reported 3.0 days per month (Table 5.2).[6]

The sex difference in both physically and mentally unhealthy days was most pronounced among the younger age groups. As men and women age, the sex difference in self-reported healthy days decreased (Figure 5.2).[6]

Figure 5.2.

Mean number of days mental and physical health not good in past 30 days by sex and age, Maine, 2005-2009



Source: BRFSS[6]

Socio-economic Factors

Education and income were inversely related to unhealthy physical and mental health days. Women who had not graduated from high school reported more than two times the number of mentally unhealthy days and three times the number of physically unhealthy days compared to women with a college degree (Table 5.2). The same pattern was evident by income level. Women with annual household incomes less than $15,000 reported 8.4 physically unhealthy and 7.5 mentally unhealthy days on average per month. In other words, women in the lowest income bracket did not feel well at least 25% of the month. In comparison, women with household incomes of $75,000 or more reported 1.8 physically unhealthy days and 2.2 mentally unhealthy days per month; they did not feel well less than 1% of the month (Table 5.2).[6]

Public Health District

Across public health districts, the average number of days of reported poor mental and physical health was similar, between 3 and 4.5 days (Table 5.2).[6]

Table 5.2. Mean days in last 30 days that women's mental and physical health was not good by demographic characteristics, Maine, 2005–2009.

Characteristic	Mean # of days in last 30 mental health not good	Mean # of days in last 30 physical health not good
Age Group		
18-24	5.1	3.0
25-34	4.6	3.1
35-44	4.7	3.4
45-54	4.4	4.3
55-64	3.3	4.0
65-74	2.3	4.8
75+	1.8	5.5
Education		
< High School	6.2	7.3
High School	4.4	4.7
Attended College or Technical School	4.2	4.0
College or Technical School Graduate	2.7	2.6
Annual Household Income		
<$15,000	7.3	8.4
$15,000 - $24,999	5.5	5.7
$25,000 - $34,999	4.3	4.0
$35,000 - $49,999	3.7	3.2
$50,000 - $74,999	2.8	2.5
$75,000 +	2.2	1.8
Public Health District		
Aroostook	4.1	4.5
Cumberland	3.7	3.3
Central	3.9	4.0
Downeast	3.9	4.2
Midcoast	3.7	3.7
Penquis	4.1	4.4
Western	4.2	4.2
York	3.7	3.7

Source: BRFSS[6]

Depression and Anxiety

Depression and anxiety are two common mental disorders that have been associated with each other, and with other diseases.[9, 10] Women are at a greater risk for experiencing depression and anxiety than men regardless of age.[11]

Depression tends to affect those who are:[12, 13]

- Aged 45 to 64 years
- Women
- Blacks, Hispanics, non-Hispanic persons of other races or multiple races
- Persons with less than a high school education
- Divorced or separated adults
- Individuals unable to work or unemployed
- Persons without health insurance coverage

Many women face a worsening of pre-existing mental health conditions as they age or they may experience the onset of new illness for the first time. For some, this may be hormonally-triggered by menopause.[14]

Reduced productivity and increased absences from work and school are two effects of depression; it has also been associated with chronic diseases, including asthma, cardiovascular disease, diabetes and obesity.[12, 15] The exact relationship between physical and mental health is unknown, but it has been suggested that the association could be due to either physiological or behavioral factors.[15] One study found coronary heart disease to be associated with depression, regardless of confounding behavioral factors such as obesity and smoking (both of which are associated with depression and coronary heart disease).[16] Depression, anxiety and alcohol abuse also commonly co-occur.[17] Individuals with depression are more likely to smoke, be physically inactive, and drink heavily.[15] Based on data from the National Health Interview Survey, more than half of women with depression or anxiety reported current activity limitations, compared to about 30% of women without these conditions. More than 27% of women with depression and anxiety were current smokers - nearly twice the proportion of women without a mental illness.[18]

Depression affects individuals' perceptions of their overall health. According to the National Survey of Drug Use and Health, those who had a major depressive episode in the past year were more likely to say that their overall health was fair or poor, compared to those who did not have a depressive episode.[13] Other studies have shown that individuals with depression and anxiety tend to have more "unexplained" physical ailments than those without depression.[19] There is evidence that individuals who are newly diagnosed with a chronic disease may become depressed, which may also contribute to a poor physical health self-assessment.[10] The relationship between depression and physical health may be reciprocal: depression is associated with chronic illnesses, and chronic illnesses may lead to depression.

Treatment for depression includes prescription medication and talking to a medical doctor or other professional.[13] However, based on data from the 2008 National Survey on Drug Use and

Health, women are more than twice as likely as men to have an unmet need for mental health treatment or counseling.[18]

Prevalence

According to national data, 33.7% of women have ever been diagnosed with depression and 23.0% of women reported ever experiencing generalized anxiety.[18] In Maine, more than 1 in 4 (29%) women in Maine have ever been diagnosed with depression and 1 in 5 have been diagnosed with an anxiety disorder (21.0%; Table 5.3).[6]

Sex

Depression and anxiety are more common in women than men.[20-22] The reason for greater prevalence of depression among women is unknown, although response to stressful events, genetics, and hormonal differences may play a role.[10]

More women than men in Maine have been diagnosed with an anxiety disorder or depression. While the prevalence of these diagnoses has declined or remained constant in men over time, the prevalence has been increasing among women. For Maine women the prevalence of anxiety was 18.8% in 2006 compared to 21% in 2009; depression prevalence was 24.1% in 2006 and 28.6% in 2009 (Table 5.3).[6]

Table 5.3. Prevalence of anxiety disorder or depression by sex, Maine, 2006-2009.

	Been diagnosed with anxiety disorder				Been diagnosed with depression			
	Females		Males		Females		Males	
Year	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
2006	18.8	(16.5 - 21.1)	13.1	(10.8 -15.4)	24.1	(22.0 - 26.2)	15.4	(13.2 - 17.7)
2008	20.0	(17.7 - 22.1)	13.4	(11.1 - 15.7)	26.9	(24.5 - 29.3)	14.3	(12.0 - 16.5)
2009	21.0	(19.4 - 22.5)	11.8	(10.3 - 13.3)	28.6	(26.9 - 30.3)	15.6	(13.9 - 17.2)

Source: BRFSS[6]

Age

The percentage of Maine women with a lifetime diagnosis of depression was highest among those aged 18-64 years and lowest among those over age 65 (Table 5.4).[6] This pattern is similar to national data, which has found that the rate of depression reported by females is highest among those aged 40–59 years and lowest among those aged 60 years and older.[18] Research suggests that the lower prevalence of depression diagnosis among the elderly is not due to age, but due to a cohort effect. Attitudes of physicians and patients have changed in relation to health care seeking behaviors and later-born cohorts of women are more aggressive about seeking mental health care compared to earlier cohorts. As a result, we will likely see a shift in the age distribution of lifetime depression as younger cohorts age and continue to actively seek out mental health care.[23]

Table 5.4. Prevalence of anxiety disorder or depression by sex and age, Maine, 2006-2009.

	Been diagnosed with anxiety disorder				Been diagnosed with depression			
	Females		Males		Females		Males	
Age	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
18-24	28.9	(21.6 - 36.2)	17.7	(11.8 - 23.7)	31.4	(24.8 - 37.9)	15.9*	(10.5 - 21.3)
25-34	25.9	(22.6 - 29.3)	13.2	(9.7 - 16.7)	29.6	(26.2 - 33.0)	13.9	(10.2 - 17.6)
35-44	23.4	(20.9 - 25.9)	13.9	(11.3 - 16.4)	29.7	(27.0 - 32.4)	14.0	(11.5 - 16.5)
45-54	19.8	(17.9 - 21.7)	12.0	(10.1 - 13.9)	31.4	(29.1 - 33.7)	18.8	(16.4 - 21.1)
55-64	16.7	(15.0 - 18.5)	13.2	(11.3 - 15.1)	25.6	(23.5 - 27.7)	18.3	(16.1 - 20.5)
65-74	12.2	(10.2 - 14.3)	8.7	(6.6 - 10.7)	18.9	(16.4 - 21.4)	10.6	(8.3 - 12.9)
75+	9.5	(7.7 - 11.4)	5.9*	(3.6 - 8.3)	11.5	(9.5 - 13.4)	8.1	(5.5 - 10.8)

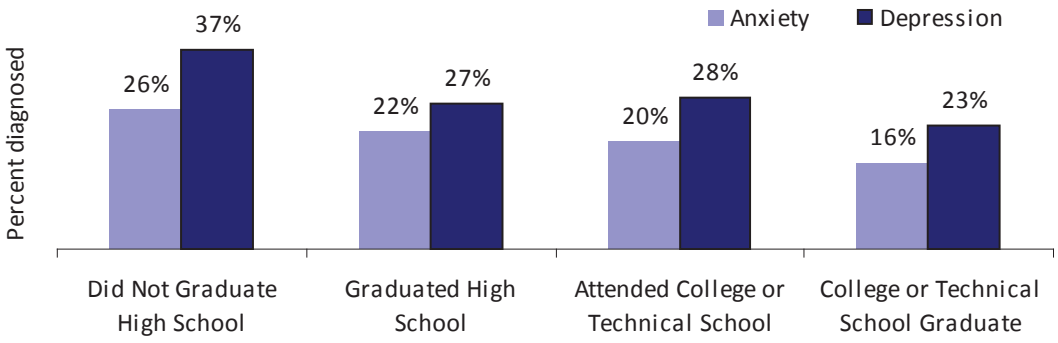
Source: BRFSS[6]
* frequency <50

Education Level

Women who did not graduate from high school were more likely to be diagnosed with anxiety or depression compared to those graduated from college or technical school (Figure 5.3). More than 1 out of every 3 women without a high school degree had ever been diagnosed with depression and 1 in 4 had been diagnosed with an anxiety disorder.[6]

Figure 5.3.

Prevalence of anxiety and depression among Maine females by education, Maine, 2006-2009



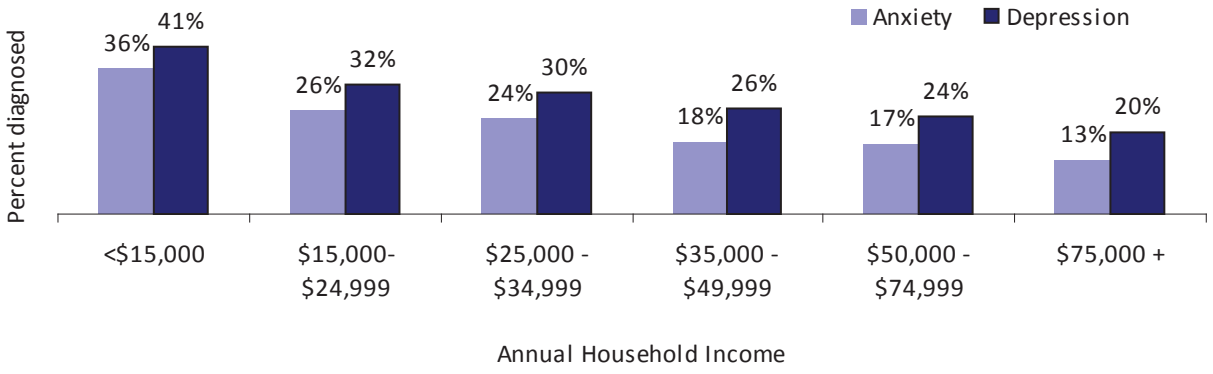
Source BRFSS[6]

Income

Research has shown that women and girls living below the poverty line are almost three times more likely to report experiencing depression compared with those living above the poverty line.[18] Similarly, in Maine, women with lower annual household income were more likely to be diagnosed with anxiety or depression compared to those with higher income (Figure 5.4); 41% of those making less than $15,000 per year and 32% of those with household incomes between $15,000-$24,999 had ever been diagnosed with depression. More than 1 in 3 women with household incomes less than $15,000 had ever been diagnosed with an anxiety disorder.[6]

Figure 5.4.

Prevalence of depression and anxiety among females by annual household income, Maine, 2006-2009



Source: BRFSS[6]

Public Health District

Across all public health districts more women than men had been diagnosed with anxiety disorder or depression. The prevalence rates of lifetime depression and anxiety were similar when comparing public health districts (Table 5.5).[6]

Table 5.5. Prevalence of anxiety disorder or depression by sex and public health district, Maine, 2006-2009.

	Been diagnosed with anxiety disorder				Been diagnosed with depression			
	Females		Males		Females		Males	
PH District	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Aroostook	21.9	(16.7 - 27.0)	15.8*	(9.8 - 21.8)	28.3	(23.0 - 33.7)	13.5*	(8.3 - 18.7)
Cumberland	21.8	(18.3 -25.4)	12.8	(10.0 - 15.7)	26.9	(24.0 - 29.7)	16.8	(13.7 - 19.8)
Central	21.2	(18.0 - 24.3)	15.2	(11.5 - 18.9)	28.5	(25.2 - 31.7)	15.6	(12.3 - 18.9)
Downeast	19.7	(16.1 - 23.3)	10.8	(7.2 - 14.4)	25.3	(21.5 - 29.2)	17.3	(13.3 - 21.2)
Midcoast	17.9	(15.6 - 20.2)	12.8	(10.4 - 15.3)	26.3	(23.8 - 28.9)	16.4	(13.7 - 19.1)
Penquis	19.2	(16.3 - 22.1)	12.1	(9.1 - 15.1)	25.8	(22.6 - 29.1)	18.3	(14.4 - 22.3)
Western	19.7	(16.9 - 22.6)	12.5	(9.7 - 15.4)	28.1	(24.9 - 31.3)	11.9	(9.3 - 14.4)
York	17.3	(14.6 - 20.0)	10.8	(7.1 - 14.6)	24.0	(20.7 - 27.3)	12.4	(8.6 - 16.1)

Source: BRFSS[6]
* frequency <50

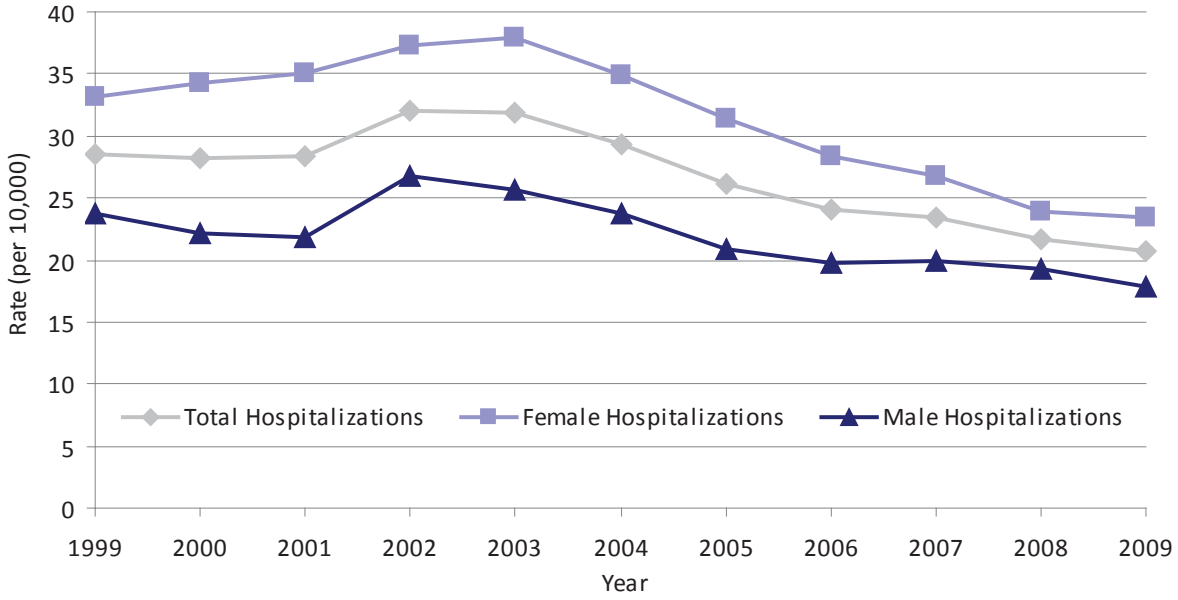
Hospitalizations

Hospitalizations for depression have declined for both men and women since their most recent peak in 2003. In Maine, this is likely due to a recent push (pursuant to the settlement of Bates vs. DHHS) towards reliance on community-level crisis services rather than hospitals.[24, 25]

Maine women were more likely than men to be hospitalized for depression between 1999 and 2009. However the gender gap in depression hospitalizations has narrowed over time (Figure 5.5).[26]

Figure 5.5.

Age-adjusted rate of hospitalizations for depression by sex and year, Maine, 1999-2009



Source: Maine Health Data Organization[26]
ICD-9 Codes: 293.83 296.20-296.36 300.4 311.0

References

1. Galson, S.K., *Mental Health Matters.* Public Health Reports, 2009. 124(2): p. 189-191.
2. US Department of Health and Human Services. *Alcohol and Tobacco*. Alcohol Alert, 2007. 71: [cited 2011 October 26]; Available from: http://pubs.niaaa.nih.gov/publications/AA71/AA71.htm.
3. Maine Center for Disease Control & Prevention. *Physical Activity and Health*. 2011 [cited 2011 October 26]; Available from: http://www.cdc.gov/physicalactivity/everyone/health/index.html#ImproveMentalHealth.
4. Maine Center for Disease Control & Prevention, Division of Family Health, *Maine's Title V Maternal and Child Health Strengths and Needs Assessment*. 2010, Department of Health and Human Services: Augusta, Maine.
5. Centers for Disease Control and Prevention, *Measuring Healthy Days*. 2000. Atlanta, GA.
6. Maine Center for Disease Control & Prevention, *Behavioral Risk Factor Surveillance System*. Analyzed by University of Southern Maine, Department of Applied Medical Sciences: Augusta Maine. 2011.
7. Centers for Disease Control and Prevention. *Health-Related Quality of Life: Data and Statistics (Table 3)*. 2009 [cited 2011 August 18]; Available from: http://www.cdc.gov/hrqol/data/tables/table3A.htm.
8. Centers for Disease Control and Prevention. *Health-Related Quality of Life: Data and Statistics (Table 2)*. 2009 [cited 2011 August 18]; Available from: http://www.cdc.gov/hrqol/data/tables/table2A.htm.
9. Kessler, R.C., Berglund, P., Demler, O. et al. , *The Epidemiology of Major Depressive Disorder: Results from the National Comorbidity Survey Replication (NCS-R).* Journal of the American Medical Association, 2003. 289: p. 3095 – 3105.
10. Gonzalez, O., et al. *Current Depression Among Adults – United States, 2006 and 2008.* Morbidity and Mortality Weekly Report, 2010. 59(38): p. 1229-1235.
11. US Department of Commerce Economics and Statistics Administration, The Excutive Office of the President, The Office of Management and Budget. *Women in America: Indicators of Social and Economic Well-Being*. 2011 [cited May 23 2011]; Available from: http://www.whitehouse.gov/sites/default/files/rss_viewer/Women_in_America.pdf.
12. Centers for Disease Control and Prevention. *CDC Features: An Estimated 1 in 10 U.S. Adults Report Depression*. 2011 [cited 2011 July 13]; Available from: http://www.cdc.gov/Features/dsDepression/.
13. Substance Abuse and Mental Health Services Administration, Office of Applied Studies, *The NSDUH Report: Major Depressive Episode and Treatment among Adults*. 2009: Rockville, MD.
14. Sajatovic, M.R., M.B.; Plax MS, Meyer, M.L.; Bingham, C.R., *Mental Illness and Menopause: A patient and family perspective.* Journal of Gender Specific Medicine, 2003. 6(2): p. 31-4.
15. Strine, T.W., Mokdad, A.H., Balluz, L.S., *Depression and Anxiety in the United States:Findings from the 2006 Behavioral Risk Factor Surveillance System.* Psychiatric Services, 2008. 59: p. 1383-1390.
16. Gorman, J.M., *Gender differences in depression and response to psychotropic medication.* Gender Medicine, 2006. 3: p. 93-109.

17. Substance Abuse and Mental Health Services Administration, Office of Applied Studies, *The NSDUH Report: Co-Occurring Major Depressive Episode (MDE) and Alcohol Use Disorder among Adults*. 2007: Rockville, MD.
18. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau, *Women's Health USA 2010*. 2010, U.S. Department of Health and Human Services: Rockville, MD.
19. Katon, W., Lin, E.H.B., Kroenke, K., *The association of depression and anxiety with medical symptom burden in patients with chronic medical illness.* General Hospital Psychiatry, 2007. 29: p. 147-155.
20. Seedat, S., Scott, K.M., Angermeyer, M.C. et al., *Cross-National Associations Between Gender and Mental Disorders in the World Health Organization World Mental Health Surveys.* Arch Gen Psychiatry, 2009. 66(7): p. 785-795.
21. National Institute of Mental Health. *Anxiety Disorders*. 2010 [cited 2011 July 13]; Available from: http://www.nimh.nih.gov/health/publications/anxiety-disorders/complete-index.shtml#pub7.
22. Kessler, R.C., Birnbaum, H.G., Shahly, V. et al. , *Age Differences in the Prevalence and Co-Morbidity of DSM-IV Major Depressive Episodes: Results From the WHO World Mental Health Survey Initiative.* Depression and Anxiety, 2010. 27: p. 351-364.
23. Glied, S., *The Diagnosis and Treatment of Mental Health Problems Among Older Women.* JAMWA, 1998. 53(4): p. 187-191.
24. National Alliance on Mental Illness Maine. *OVERVIEW OF THE "AMHI CONSENT DECREE"*. January 2009 [cited October 21 2011]; Available from: http://www.nami.org/Content/Microsites186/NAMI_Maine/Home174/FAMILY_Newsletter-_Winter_2006/consentdecreeinfopacket.pdf.
25. Maine Department of Health and Human Services. *Adult Mental Health Services Plan, Consent Decree Plan*. October 2006 [cited 2011 October 21]; Available from: http://www.maine.gov/dhhs/mh/consent_decree/cd-plan/Plan_October_2006.doc.
26. Maine Health Data Organization, *Maine Hospital Discharge Data (Inpatient and Outpatient/Emergency Department)*. Analyzed by University of Southern Maine, Department of Applied Medical Sciences: Augusta, ME. 2011.